

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"20040080241"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:18
L2	609	quartz same crystal same resonator same electrode	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:20
L3	66	quartz same crystal same resonator same electrode and sealing	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:58
L4	4226	piezoelectric adj resonator	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:50
L5	1030921	leads	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:50
L6	11509	conductive adj resin	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:50
L7	2796	connecting adj layer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:51
L8	2	4 and 5 and 6 and 7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:51
L9	4	4 and 5 and 6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:51
L10	10	("4451753").URPN.	USPAT	OR	OFF	2006/12/21 15:54
L11	1576	29/25.35.ccls.	USPAT	OR	OFF	2006/12/21 15:55

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L12	0	11 and 9	USPAT	OR	OFF	2006/12/21 15:55
L13	1378	29/840.ccls.	USPAT	OR	OFF	2006/12/21 15:56
L14	1	13 and 4 and 5	USPAT	OR	OFF	2006/12/21 15:56
L15	17	("2824219"   "3931388"   "3969640"   "4035673"   "4110655"   "4252839"   "4293986"   "4405875"   "4445256"   "4639631"   "4652787"   "5235237"   "5304887"   "5877042"   "5956054"   "6037065").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 15:56
L16	5	quartz same crystal same resonator same leads same conductive same resin	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 15:58
L17	7	("4827226"   "4916413"   "5030926"   "5229640"   "5302921"   "5392006"   "5592130").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:06
L18	1635	29/830.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:07
L19	2	18 and 4 and 5	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:07
L20	7	("4205248"   "4232109"   "4633124"   "5178682"   "5824900"   "5918354"   "6114795").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:08
L21	2089	29/846.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:08
L22	1	21 and 4 and 5	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:08
L23	1	("5801069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:09
L24	459	310/344.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:09
L25	26	24 and 4 and 5	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:09
L26	0	24 and 4 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:10
L27	2	24 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:10

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L28	864	310/348.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:11
L29	4	28 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:11
L30	3	("4047129"   "4734608"   "5623236"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:12
L31	832	310/311.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:12
L32	3	31 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:12
L33	115	310/351.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L34	0	33 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L35	347	228/206.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L36	0	35 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L37	2058	428/463.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L38	0	37 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:13
L39	459	428/645.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:14
L40	0	39 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:14
L41	4	("4916413"   "5229640"   "5302921"   "5392006").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:26
L42	1024	Yasumistu Ikegami.inv.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:26

## EAST Search History

L43	6	42 and 5 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:27
L44	57	quart near crystal	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:29
L45	5	44 and 4	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:29
L46	8	("3411023"   "4350918"   "4900971"   "5001383"   "5059853"   "5107164"   "5442251").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:31
L47	2	"5918354".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/21 16:32
L48	29	("3762941"   "4012307"   "4430547"   "4705593"   "4708766"   "4749440"   "4857382"   "4921157"   "5000819"   "5045166"   "5120568"   "5126164"   "5147520"   "5178682"   "5201995"   "5225659"   "5240559"   "5290378"   "5292370"   "5316739"   "5340618"   "5368685"   "5384167"   "5391855"   "5399830"   "5407121"   "5449432"   "5499754"   "5597438").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:34
L49	1	"6332567".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:34
L50	34	("2085587"   "3762941"   "4012307"   "4430547"   "4705593"   "4708766"   "4749440"   "4857382"   "4921157"   "5000819"   "5045166"   "5120568"   "5126164"   "5147520"   "5161727"   "5178682"   "5201995"   "5225659"   "5240559"   "5290378"   "5292370"   "5316739"   "5340618"   "5368685"   "5384167"   "5391855"   "5399830"   "5407121"   "5433820"   "5449432"   "5499754"   "5597438"   "5609290"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:35
L51	4	piezoelectric same resonator same leads same conductive same resin	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 16:36

## EAST Search History

L52	18	((("4415826") or ("4486681") or ("2413579") or ("3849681") or ("5867074") or ("4639632"))).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/21 16:38
L53	0	("5867084.pn.").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/21 16:39
L54	2	"5867084".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 17:07
L55	962	228/179.1.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 17:07
L56	2	55 and 5 and 6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 17:09
L57	2	"4451753".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/21 17:09
L58	10	("4451753").URPN.	USPAT	OR	OFF	2006/12/21 17:09
L59	15	("2540851"   "2912605"   "3650003"   "3747176"   "4017752"   "4445256"   "4451753"   "4485325"   "4684843"   "5117147"   "5166570"   "5350965"   "5410789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 17:10
L60	3	("3397329"   "3818254").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/12/21 17:10

# PATENT ABSTRACTS OF JAPAN

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H03H 9/10

(21)Application number : 59-213913

(71)Applicant : MATSUSHITA ELECTRIC IND CO  
LTD

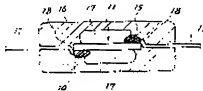
(22)Date of filing : 11.10.1984

(72)Inventor : KASHIWAGI YUKIO

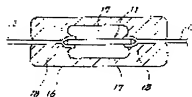
## (54) PIEZOELECTRIC PORCELAIN VIBRATOR

### (57)Abstract:

PURPOSE: To attain ease and complete space forming in a resonance electrode and excellent characteristic by containing a piezoelectric element of a piezoelectric porcelain vibrator to be used as clock signal generation of one chip microcomputer and a lead terminal incorporated together into a glass tube or an insulation resin case.



CONSTITUTION: Lead terminal 12, 13 are fixed and connected by conductive adhesives 14, 15 (or soldered) across a rectangular piezoelectric element 11. The piezoelectric element 11 and the leads terminals 12, 13 incorporated together are inserted into an insulation resin case 16 (or glass tube) so that the lead terminals 12, 13 are projected externally. A resin case 16 is



formed so as to form a space 17 at both sides of a resonator electrode of the piezoelectric element 11 especially in the insertion state. Further, the conductor part between the lead terminals 12 and 13 of the piezoelectric element 11 and the lead terminals 12, 13 are supported at a seal part 18 of the resin case 16. It can be attained also by fitting externally the lead terminals 12, 13 across the piezoelectric element 11 to mutually conduct them.

## LEGAL STATUS

[Date of request for examination]

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